

Thinking styles of modern Chinese leaders: Independence and exploration in an historically conditional China

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The research examined how Chinese leaders view the thinking process, what thinking styles they value and how they prefer to think. The methodological framework used quantitative analyses of two thinking styles inventories. The survey included a sample of nearly 300 leaders from a wide representation of industry sectors across China who completed Sofo's Thinking Style Inventory (TSI) (Sofa 2002). Additionally, 22 of these leaders completed three forms of thinking style (Sternberg 1997). Another sample of 172 non-education leaders' thinking styles were compared with 48 educational leaders' thinking styles using independent sample t-tests and supported by analysis of variance. The findings showed that Chinese leaders have strong preferences for 'executive', 'judicial' and 'legislative' styles of thinking as well as high preferences for independent and exploring styles. They reported moderate preferences for 'inquiring' and 'creative' styles and low preference

for 'conditional' style, an indication that Chinese leaders may be at the forefront of change in an historically conditional China.

Introduction

The Chinese culture has a long history of recorded intellectual and philosophical traditions; however, the entrenched legacy of the Chinese communist rule infers that citizens are expected to think conditionally – that is, to think like their leaders and the governing party of the day. China's social values and structures are different from Western ones, and this means that understanding ways of thinking is important, especially given the increasing profile that China is taking in the world. The collapse of conventional communism, the waning of socialism and the emergence of a global capitalist system in China has posed a new set of uncertainties for some Western countries.

According to Fishman (2005), China is everywhere these days and it is influencing the lives of consumers, employees and citizens through its rapidly changing massive economy, resulting in leaders and executives being at the forefront of cultural change brought about by reform and decentralization in the new global economy that China has entered with alacrity. China's keenness to learn from, and work with, the West, while equalling or indeed surpassing them at the innovation and economic game, is gathering momentum. There is a mystery and fascination with Chinese ways of thinking, and one wonders to what extent leaders Chinese leaders and executives use styles of thinking that can be analysed gainfully with Western frameworks. Previously there was no choice but to begin with Western conceptions as a search of Chinese literature does not yield any accessible research tools or frameworks. Studies on thinking styles conducted in China tend to be laden with perspectives originating from the West, notably Sternberg's (1997) theory of thinking style (Cheng, Chen & Yu 2002,

Cheng & Chang 2000). One consequence has been the importation of Western theories to Chinese settings with unproven appropriateness, and since little research has been conducted in the field of thinking style, it is not possible to say if such approaches have been successful in the non-Western setting. Cross-cultural understanding in the emerging globalised world is increasingly imperative and any theories or practices used as the foundation for investigation should be aligned with the specific contextual factors.

This paper explores a theory of reality construction based upon styles of thinking developed by Sofo (2004). In this theory, style of thinking is not an ability, but instead a preference to use various abilities in particular ways. Thinking style may correspond to the way we like to acknowledge, process and use information to perceive and interpret the world around us. It denotes conscious, semi-conscious or unconscious constructions of elegance in a mental strategy to optimise the use of personal resources in effectively responding to a particular situation or to certain information. A person's style of thinking is used to deal with routine as well as non-routine situations that are encountered and a particular thinking style profile may allow a person to use their thinking flexibly. If a person has a very strong aversion, either consciously or unconsciously, to a conditional style of thinking, they may not be able to employ that style if a situation demands it; instead, they may find themselves adjusting their thinking in a way to achieve the outcome they want but doing so less efficiently and effectively. A person's preferred style of thinking, therefore, is a comfortable way to create an individual and shared view of the world, and this level of comfort is part of whether or not they feel their thinking is dominated by what others say and do.

In order to explore the theory of reality construction, this study analyses ways of thinking that are characteristic of managers, supervisors, decision-makers and executives in China. The two key research questions are:

- What is the thinking style profile of Chinese leaders?
- Do Chinese education leaders differ from non-education leaders across Sofo's five thinking styles using Thinking Style Inventory (TSI) measures?

In answering these questions, thinking styles are defined as preferences that provide an alternative perspective to performance and ability. As intelligence tests are not strong predictors of individual functioning (Sternberg 1997), thinking styles are said to be better predictors of academic variables, employment variables and self-rated abilities (Grigorenko & Sternberg 1997). Thinking style inventories such as those designed by Sternberg (1997) and Sofo (2002) are useful as they produce a unique profile of preference for each individual.

The study focuses on thinking style profiles of Chinese leaders by first reflecting on Hofstede's cultural elements that may impact on thinking style. This then sets a basis from which cognition, personality and learning focused theories of thinking style are reviewed. From here it is possible to outline Sternberg's theory of mental self-government and Sofo's theory of reality construction – both of which are underpinned by thinking style. Finally, the data are analysed to provide insight into the two key questions posed in the paper which leads to the construction of a model indicating the confluence of Chinese and Western conceptions of thinking style.

Review of the literature

It is questionable if cultural differences presuppose different thinking styles. Hofstede (2001) postulated a dichotomised way of representing cultural differences that may lead to unjustifiable generalisations and may ignore the subtleties and frequent contradictions inherent in many national cultures. Contrary to his views, there may not be national cultures or national ways of thinking, since subcultures within a country can vary greatly in their values and beliefs while the

rapid progress of globalisation may be having homogenised effects. Nevertheless, Hofstede's framework for understanding national differences has been one of the most influential and widely used frameworks in cross-cultural studies. Hofstede's original dimensions of culture (power distance – a society's acceptance of the unequal distribution of power; individualism/collectivism – the extent to which the interests of the individual prevail over the interests of the group within society; and masculinity/femininity – the relative strength of masculine versus feminine values in a society) tend to split the 53 countries he studied into an East-West division.

Thinking style refers to a set of variables that influences how a task is accomplished such as intelligence, personality and degree of difficulty of a task itself (Grigorenko & Sternberg 1997). Thinking style (amongst other things) bridges intelligence and personality (Tang 2003). The field of thinking styles can be approached from a number of broad perspectives since thinking style has been conceptualised in various ways. Here, three broad categories are reviewed that include cognition, personality and learning theories. Overall these approaches to thinking styles represent an historical analysis of the field in its infancy, and the theories generally are not clear if thinking style is an intellectual capacity, a preferential personality trait or a learning style.

Various authors have identified and supported a number of cognition-centred thinking styles including *category width* (Gardner & Schoen 1962; Petigrew 1958), *conceptual style* (Kagan, Joss & Sigel 1963), *impulsivity – reflective* (Kagan 1966), *compartmentalization* (Messick & Kogan 1963), *conceptual integration* (Harvey, Hunt & Schroder 1961), *tolerance for unrealistic experiences* (Klein, Riley & Schlesinger 1962) and *scanning* (Gardner 1968). The psychological literature is replete with thinking styles such as *divergent and convergent* (Hudson 1996), *relational or female and abstracting or male* (Shouksmith 1972), Harrison and Bramson (1982) posited five

styles: *synthesist, idealist, pragmatist, analyst and realist*, and the Herrmann Brain Dominance styles (Coulston & Strickland 1983).

Thinking style bridges intelligence and personality. The most well-known personality type conceptualisation of thinking style is the Jungian model operationalised into the Myers-Briggs Type Indicator. There are sixteen personality type combinations grouped in the following personality traits: *introversion or extroversion, sensing or intuiting, thinking or feeling, and judging or perceiving*. Gregorc (1982) posed a theory of the energetic mind, suggesting four groups: *concrete sequential thinkers* who prefer to process information in an ordered sequential way; *concrete random thinkers* who like to think as experimenters; *abstract sequential thinkers* who like to think in ordered theoretical terms; and *abstract random thinkers* who tend to prefer unstructured and people-centred environments as the basis for their thinking. The conceptions that inform this model include how information is processed, whether the preference is along abstract or concrete terms or using sequential or random patterns. Understanding thinking styles from a personality perspective attempts to acknowledge human flexibility and diversity in spite of classifying people into 'types'. However, the experimental basis of studies from this perspective is not strong and often the factor structures lack rigorous support and there is not always a clear distinction between personality type and thinking style (Tang 2003).

Learning-centred theories of thinking style tend to focus more on learning and developed from a need to improve learning and to match differences in individual abilities with instructional strategies and learning environments. Thinking styles may not be too different from learning styles as these refer to unique ways that individuals prefer to process information. Through the preferred ways of using our senses, we are able to learn (assimilate information) and to acquire understanding, appreciation, skills and attitudes. Style of learning is how we prefer to perceive, interact with and respond

to the environment and is focused on 'sensory' modalities such as auditory, kinesthetic, tactile, olfactory and visual, while thinking style is more focused on the cognitive process such as governing, creating, constructing, implementing, analysing, evaluating, obeying, questioning, exploring, acting independently (Sternberg 1997, Sofo 2004). Thinking style tends to be equated to learning style research that maintains that there is a strong genetic disposition to learning in a particular way that can be influenced and changed by the environment, by life demands and by personal effort. Sternberg (1997, 2000) recognised that only something like 50% of performance is attributable to intelligence and ability, while the other half is attributable to style of thinking.

Watkins and Biggs (2001) asked if teachers can change their thinking and if they can be persuaded to adopt different practices. If this is possible, how should innovations be introduced to facilitate such changes? These questions about learning and teaching hinge on questions about ways of thinking or thinking styles. Kember (2001) proposed five dimensions to studying conceptions of teaching and one of these is the preferred styles and approaches to teaching. We know from research into the relationship between teaching styles and thinking styles that students perform better when they match their thinking style with that of the teacher. It would appear that teaching style has a component of thinking style embedded within it. Similarly, conceptions of learning have preferences or modes for memorising, reproducing, applying, understanding, seeing things differently and changing a person as their basis (Marton, Dall'Alba & Beatty 1993).

Sternberg's theory of mental self-government overcomes many of the flaws found in cognitive, personality and learning-centred theories of thinking style because it can account for both external (social) and internal (cognitive) processes, it integrates various styles already described and simultaneously distinguishes them from cognitive abilities or personality traits by demonstrating how they

are preferences (Tang 2003). Sternberg's triarchic theory of the mind postulates the existence of three types of intelligence that are abilities to achieve adaptation and recognises that it is more important to understand and use one's intelligence than to know how much intelligence a person has. The three elements of the triarchic theory include the mental processes underlying behaviour, the experiential and the socio-cultural contextual impact on one's thinking. The model of self-government suggests that governing systems reflect how the human mind functions since both need to marshal their resources, organise their lives and set priorities. The theory postulates thirteen thinking styles that differ along five dimensions of self-government: functions, forms, levels, scopes and leanings. Each dimension has its own sub-categories of preferences. Of relevance here is the functions dimensions which refer to different goals of thinking and include *legislative*, a preference for creating legislation, structures and strategies; *executive*, a preference for implementing strategy within set structures and guidelines; and *judiciary*, a preference for evaluating products of others within existing structures.

There is some support for Sternberg's (1997) assertion that thinking styles are different from abilities and that they lie at the interface between cognition and personality. Exactly where they lie is unclear, since it appears that some styles may be closer to being abilities (monarchic or hierarchic; local or global) while others may be closer to being personality characteristics (introversion and extraversion). People may not have one static style of thinking since they vary across tasks, situations and personalities. Thinking styles are only effective or ineffective depending on the fit with the situation. The research seems to indicate that people have a profile of styles that varies contextually rather than over their life (Tang 2003). The complexity of thinking styles seems to defy the either-or logic since some people can be legislative, executive and judicial simultaneously. Furthermore, there are numerous possibilities of thinking style profiles and it appears that styles are socialised, teachable and that

the flexibility and strength of these vary across individuals and their life spans. Thinking styles vary with age, sex, level of education, work and travel experience (Sternberg 1997, Zhang 1999, Zhang & Sachs 1997).

Sofo's philosophy of teaching and learning conforms to andragogical frameworks derived from the work of Boud and Miller (1996), Knowles (1990), Mezirow (1981) and Schon (1987). These theorists emphasise experiential learning, lifelong learning, learning that is problem-based and a constructivist model of development and knowledge creation founded on cooperative critical reflection. In this study, thinking is seen as an essential component of learning that can enhance learning and performance and this is then underpinned by the belief that people have preferred styles of learning and differences in thinking that show particular strengths. It may be that some people can choose to use their thinking to suit different situations while others may not be able to adapt their thinking to different circumstances very easily (Lacy 2000). No thinking (or learning) style is better or worse than any other style for individuals, although some can be more efficient than others or be better deployed (Sofo 2004). Within any group of people, one would expect to find that there are as many differences in thinking styles as there are similarities (Vos & Dryden 2004).

Independence in thinking may be an ambiguous concept for some, since a person may have their own thought and decision while either considering other perspectives or ignoring the points of view of others. A person who asserts independence in thinking is one who feels and prefers to believe that they have ownership of their thoughts and the conclusions derived from their thinking. According to Sofo (2004), there are five thinking styles, each with its own advantages and disadvantages (as outlined in Table 1).

Table 1: Advantages and disadvantages of five thinking styles

Thinking style	Advantages	Disadvantages
Conditional	Benefit from expert advice and trust of others – mentorship	Unthinking and lose your identity – authoritarian
Inquiring	Understand reasons and details of a given situation	Avoid decisions by focusing on seeking answers
Exploring	Appreciate complexity and generate options	Confused and unwilling to commit to action
Independent	Enhance your identity	Arrogance or enthusiasm lead to failure
Creative	Imagine new ways	Fail to apply ideas

Conditional thinkers are people who tend to use their understanding, logic, analysis and synthesis of a situation as a basis for accepting what they are told about the world without really inquiring or challenging very much. This is a type of convergence in thinking where people do not move beyond what is presented to them as they prefer this since it feels comfortable and safe and may work well for them. Divergent (creative) thinkers move away from convergence or one-dimensional concrete analysis and synthesis of information by questioning, exploring, evaluating and imagining different information as a basis for formulating and co-creating their own distinctive views about the world. In life, we need to be able to think in both convergent and divergent ways depending on what different situations demand of us and what we want to make of them. For example, situations of safety or danger may be more efficiently handled through a convergence in thinking (e.g. you follow the fireman's instructions to exit this way swiftly), whereas city planners

solve a city's traffic problems through using a divergent style of thinking.

Some assumptions made in Sofo's theory of reality construction shown in this model of thinking styles follow. The thinking styles vary in strength, are not hierarchical and the boundaries between them are sometimes ambiguous; an independent thinker may never have been a strong dependent or conditional thinker; people generally are able to think across more than one thinking style at different strengths and this is determined in part by the demands of the situation; people can think in one style but not be deeply skilled, expert or confident in that style, so there is room to improve within a category or style of thinking as well as across the styles; sometimes it may not be a lack of expertise that prevents a person from using a different style of thinking, but a lack of motivation or feelings of inadequacy or threat; the thinking styles have both advantages and disadvantages and any one thinking style should not indicate a particular weakness or strength overall but simply a style that a person might like to improve in or move away from depending on their life situation; and a person with one particular thinking style profile should not regard themselves as a better thinker than someone with a different profile as people may be able to achieve their goals in life using any thinking style profile depending on the goals, the situation, the personalities and the political and social context. Regardless of the advantages and disadvantages, all thinking style profiles are useful and the challenge is to construct and utilise a thinking style profile that will work best for a person in dealing with information and situations.

Sternberg (1997, 2000) maintains that many people change with age in their styles of thinking, whilst Kolb (1976) maintains that learning style is stable throughout one's life. Seifert's (2005) work on adult learning styles supports Kolb's position. Generally speaking, thinking and learning style are adaptive processes but seem to remain constant throughout one's life (Seifert 2005, Sofo 2004). To explore this, Sofo

(2002) developed a thinking styles inventory where factor analysis identified five thinking styles based on how we like to accept, process and deal with information (as detailed below).

Method

Two thinking style inventories were used: the Thinking Style Inventory (TSI) (Sofo, 2002) and Sternberg's three Forms of Thinking Styles (1997). Scores were interpreted according to instructions established by Sofo's TSI (2002) and Sternberg (1997) to identify patterns of thinking styles for individuals and groups. Data from all sources were compared and contrasted in order to consider the findings in the light of the literature to suggest a framework that is culturally sensitive.

Sofo's (2002) TSI consists of ten items each with five alternatives. Each of the alternatives represents a response that indicates a preference for one of the five styles of thinking measured by the TSI. The five thinking style categories are:

- *Conditional*: the individual likes to accept what others think and say without questioning. Conditional, a form of convergent thinking, focuses on accepting the information and situation presented.
- *Inquiring*: the individual likes to question and to understand the reasons behind what others are saying. As a form of convergent thinking, *inquiring* individuals only ask about, not challenge, the cohesion and unity of the information and situation.
- *Exploring*: the individual likes to search all sides of an issue. *Exploring* is divergent thinking because the individual searches for options and likes to create options or alternative ways of thinking about the context itself by discovering new contexts.
- *Independent*: the individual likes to form their own views. The individual may accept the given views as their own because they have good reasons or perhaps intuition for accepting them.

Similarly, the individual may have good reasons or perhaps intuition for rejecting parts or all of the given information and formulating their own conclusions.

- *Creative*: the individual likes to create vivid pictures when they think. This is divergent thinking because they are inventing images for themselves that create a sense of the whole or broader perspective.

A high score in one of the five thinking categories indicates a preference for that style of thinking, while a lower score indicates a lesser preference. The styles are not arranged in a hierarchy and you do not need to be skilled in any particular stage of thinking before you can achieve another stage. The stages are not mutually exclusive as the boundaries are semi-permeable and overlap. It is likely that we can all operate at several stages depending on the situation; however, people act best when they adopt a thinking style profile in a given situation that is comfortable for them and appropriate to the context.

When constructing the instrument, Cronbach's alpha measures were used to establish the reliability of the TSI. For each of the five dimensions of thinking style, the reliability coefficient for $n = 220$ cases was: Conditional alpha = 0.7; Inquiry alpha = 0.5; Exploring alpha = 0.6; Independent alpha = 0.6; Creative alpha = 0.8.

The three Forms of Thinking Styles developed by Sternberg and Grigorenko (Sternberg 1997) are built on the metaphor of forms of self-government as outlined earlier. The inventory has demonstrated its reliability and validity in a Hong Kong population (Zhang 1999), but has not been used with educational leaders from China or from Australia.

This study used both a quantitative and qualitative approach. The sample includes 290 leaders from a wide representation of industry sectors who were surveyed using the TSI (Sofo 2002). A sample of 22 Chinese educational leaders volunteered to provide information on thinking styles at a deeper level and thus completed Sternberg's

(1997) three Forms of Thinking Styles. The thinking styles of a further 172 non-education leaders were compared with 48 education leaders using independent sample t-tests.

Approximately 60% of the sample ($n = 220$) who completed the TSI were leaders on educational tours to Australia to discover new theories and practices. Twenty percent (20%) of these were leaders from Beijing working in the oil and petroleum industry and another 20% were educational leaders from the Zhejiang Province. All the research instruments were translated into Chinese characters. An overview of the methodology is shown in Table 2.

Table 2: Research questions and methods of data analyses

Question	Data collection instruments	Analysis method
1. What is the thinking style profile of Chinese leaders?	TSI (Sofo 2002) Five dimensions: Conditional, Inquiring, Exploring, Independent, Creative	<ul style="list-style-type: none"> • 1. Compute reliability co-efficient of Sofo's TSI ($n=220$) • 2. Compare means of TSI using repeated measures ANOVA ($n=220$)
2. Do Chinese education leaders differ from non-education leaders across Sofo's five thinking styles?	Three Forms of Thinking Style (Sternberg, 1997) TSI (Sofo, 2002)	<ul style="list-style-type: none"> 1. Correlations between Sofo and Sternberg ($n=22$) 2. Compute five "independent sample t-tests" on education ($n=48$) vs non-education ($n=172$) leaders

Results

To answer the first question on Chinese leaders' preferred ways of thinking, descriptive statistics were calculated for both the Sofo (Table 3) and Sternberg (Table 4) thinking style inventories.

Table 3: Means and standard deviations of Chinese leaders on Sofo's Thinking Style Inventory (N = 220)

Total scores across 5 dimensions	Mean	Standard deviation
1. Conditional	20.87	6.36
2. Inquiry	30.09	5.19
3. Exploring	35.79	5.47
4. Independent	36.68	5.57
5. Creative	26.53	7.95

When interpreting the TSI, a lower score indicates an individual's less-preferred thinking style while a higher score indicates a higher preference. Table 3 indicates that the least preferred style of thinking among Chinese leaders was the conditional style (mean=20.87), while the independent style was the most preferred (mean=36.68). These styles are quantitatively different (supported by ANOVA at $p < .001$) from each other as far as conformity in decision-making is concerned. The exploring style (mean=35.79) was preferred almost as much as the independent style.

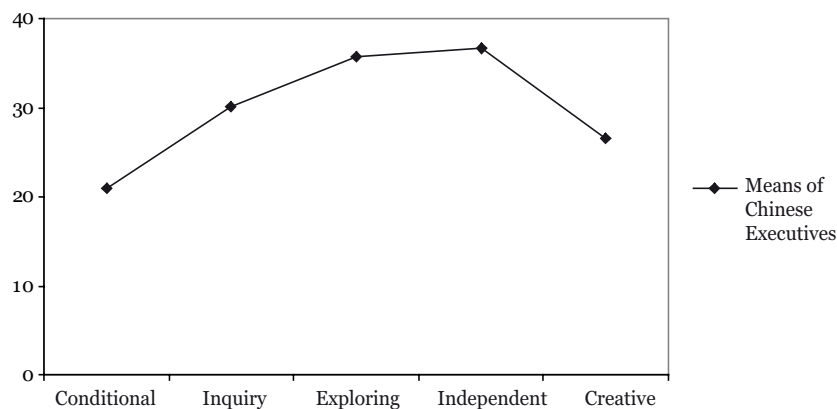


Figure 2: Profile of Chinese leaders on Sofo's TSI (N = 220)

A thinking style profile of Chinese leaders of the five preferred styles is depicted in Figure 2. Both Table 3 and Figure 2 show that the exploring and independent styles were highly preferred among the Chinese leaders. A repeated measures ANOVA indicates that each mean of the thinking styles is statistically significantly different ($p < .001$) from each other except for the exploring and independent styles where there was no significant difference. A Bonferroni adjustment was used for the 10 pairwise comparisons of the five means. This procedure is used to strengthen the robustness of the statistical significance among the means since the results help to avoid increased possibility of falsely obtaining significant differences among the means.

A smaller sample of Chinese leaders who completed the Sternberg questionnaire saw themselves having a 'high' to 'very high' ranking on the executive thinking style as indicated in Table 4. On average, a 'high' ranking was found on the judicial style and a 'high middle' ranking on the legislative style.

Table 4: Means and standard deviations of Chinese leader rankings on Sternberg's (1997) Forms of Thinking Styles

Thinking style	Mean	Standard deviation	N
Executive Style	1.92 (Very high ranking)	1.17	38
Judicial Style	2.29 (High ranking)	1.35	38
Legislative Style	3.24 (High middle ranking)	1.22	38

Figure 3 shows that on average no leaders ranked themselves as 'low middle', 'low' or 'very low' on any of these three styles (a mean of 4 or higher indicates low ranking).



Figure 3: Chinese leader thinking styles on Sternberg questionnaire (N = 38)

The second question examined if education and non-education leaders had similar thinking style profiles on Sofo's TSI. Generally the profile of these two groups of leaders was similar, that is the strongest preference was for the independent and exploratory styles followed by the inquiry and creative styles while the least preferred was for the conditional style. Table 5 presents the results of five independent sample t-tests of the scores of 48 education leaders and 172 non-education leaders on Sofo's five dimensional TSI. All leaders were aged over forty years and consisted of approximately 20%-25% women.

Table 5: Education versus non-education leaders thinking styles: 5 independent sample t-tests

Thinking style	p-value	Significance	Education mean	Non-education mean
Conditional	0.019	✓	22.33	19.73
Inquiry	0.347	✗	-	-
Exploring	0.027	✓	34.35	36.41
Independent	0.254	✗	-	-
Creative	0.077	✗	25.10	27.48

The results show that the education leaders scored themselves significantly higher ($p < .01$) when compared with the non-education leaders on the conditional style. The non-education leaders scored themselves significantly higher ($p < .02$) compared with the education leaders on the exploring style. Similarly, the non-education leaders scored themselves more highly ($p < 0.7$) than the education leaders on the creative thinking style. Although this difference is not statistically significant at the $p = 0.05$ level, the mean difference is approximating statistical significance and may be worth considering.

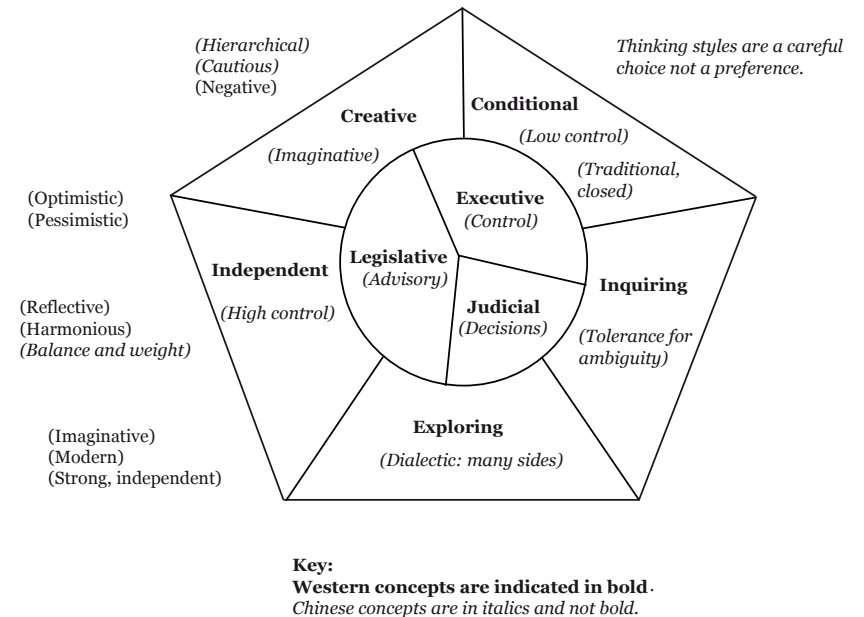
Discussion

The use of Sternberg's three Forms of Thinking and Sofo's TSI has given some insights into the thinking style profile of Chinese leaders. In a historically conditional China, the results indicate that Chinese leaders' least preferred style of thinking is conditional whilst their most preferred styles are independent and exploring. In this study, the exploring style (mean=35.79) was preferred on average almost as much as the independent style (mean=36.68) indicating that Chinese leaders reported that they feel most comfortable when they are able to generate options and explore possibilities in decision-making

and can follow this by preferring to make independent decisions. Even though the means of the exploring and independent styles are very close, this indicates that these two styles are the most preferred styles. Traditionally, those under a Communist regime were duty-bound to think like their superiors – that is, to use a conditional style of thinking. There now appears to be unwillingness for accepting information and situations without questioning. The findings suggest that Chinese leaders prefer to think more broadly and holistically through imagining, visualising and inventing options and also prefer to free up their thinking by searching for differences of opinion, alternative viewpoints and desiring independent thought.

Overall, the Chinese leaders rated themselves as having high to very high styles of thinking as measured by Sternberg's Forms of Thinking Styles (1997). Sternberg's model describes Chinese executives as 'legislative', enjoying creating policies, generating their own rules and operating with non-structured information and tasks; as 'executive', enjoying dealing with information and situations by implementing projects already planned and working within a structured framework; and as 'judicial', enjoying analysing, critiquing and evaluating ideas within existing structures. These styles are depicted at the core of Figure 4 to indicate high preferences. Even though the differences in the rankings were not statistically significant, the spread of preferences all in the high category shows a very high preference for executive style (a preference for working with existing structures) and only middle high for legislative style which is a preference for creating one's own rules and structures. A middle high preference for judicial may be interpreted as a keenness to maintain a proper balance in situations. This reflects yin and yang, an equilibrium among the three thinking styles to create harmony which is important in Chinese culture.

Figure 4: A composite model of Chinese and Western thinking styles



Taking into account the results above, a model is suggested to depict a convergence of Chinese and Western conceptions of thinking styles. The confluence depicted in Figure 4 is derived from two sources: the results of the analysed data above using Sofo and Sternberg instruments and also from the views of Chinese colleagues and over 100 Chinese leaders who expressed their opinions mostly in class discussions about Chinese thinking styles and their own styles. Contributions on thinking styles from Chinese leaders are listed in the lefthand column, as well as in brackets within the pentagon in Figure 4 where it was thought that those expressions of thinking styles parallel Sofo and Sternberg categories and framework.

Some Chinese leaders expressed a view that thinking style is not a preference but comprises a careful choice based on an assessment of the context and a desire for a balanced and effective use of the various cognitive styles and personality preferences in the decision-making process. Some new thinking styles more suited to Chinese leaders and the Chinese culture are suggested and these are listed in a column on the left side as well as in brackets within the pentagon and circle in Figure 4. For example, an advisory thinking style may be relevant to Chinese leaders since some executive positions in China do not permit decision-making but rather are solely advice-giving in nature; this type of leader mainly contributes to policy-making. It may be that the 'advisory' thinking style actually reflects Sternberg's 'legislative style' and so is indicated in Figure 4. Another style is one stressing tolerance for uncertainty and ambiguity which reflects Sofo's TSI 'conditional' and 'inquiring' styles in that all of one's trust is put into the opinions and decisions of the superior and questions may be asked for clarification purposes only since there is an acceptance of the rules and status quo. This style is indicated as a 'tolerance' thinking style similar to Sofo's TSI 'inquiring' style shown in Figure 4. Thinking styles of low and high control reflect Sofo's TSI 'conditional' (low control) and 'independent thinking style' (high control).

The findings indicate some sense of uniformity of thinking styles among education and corporate Chinese leaders, and this can improve our approaches to teaching while also contributing to developing better relationships across different cultures. For example, to optimise performance, it would be sensible to match thinking style profile with the environment since thinking styles are reflected in routine activities such as working, leading, learning and teaching. Chinese leaders have expressed a learning preference for lectures where a familiar format is followed first giving the thesis or the topic, then giving some definitions and then illustrating through examples and case studies. It is also true that, when this preference is not adhered to, generally there may be some resistance but

nevertheless cooperation since their history has demonstrated the ability to work for the common good in contrast to Western concepts of individual rights and freedom. Findings can also provide a deeper understanding of the different ways in which people make sense of the world which can be applied to organisational behaviour so it can contribute to successful decision-making, improved leadership, teamwork and effectiveness of individuals, groups and communities overall. Awareness of thinking style increases our understanding of effectiveness and efficiency in the workplace. A style that is appropriate at one point in the career path is not necessarily helpful later on, even though people may persist with the same style profile. It is uncertain whether a thinking style profile changes throughout one's career. A thinking style profile correlating positively to problem-solving tactical performance might serve to identify leadership and individual potential. Such information may also assist in matching the appropriate selection of instructional media and teaching strategies to learner preferences (Diaz 2004).

Conclusions

A dominant thinking style profile of Chinese leaders emerged from this study that favours 'exploring' and 'independent' thinking as well as high levels of mental self-government. Both thinking style inventories used in this study allowed participants to report high and/or low preferences across a number of styles. Given this capacity, it is noteworthy that the Sofo TSI includes styles on which Chinese leaders rank themselves quite low, yet they rate all three styles of Sternberg as high preferences. This implies that Chinese leaders are reporting unequal but high preferences on Sternberg's three key areas of mental self-government – that is, the legislative, the executive and the judiciary – and this is somewhat at odds to the historical China we know, but consonant with the fact that China is going through significant political and cultural change (for example, the freeing up of decision-making in the Chinese Communist Party). The Chinese

leaders in this study prefer a thinking style profile that places a high premium on these three forms of mental self-government. This suggests that their thinking styles could be as diverse and liberated as those of Western leaders in a free and democratic society – a suggestion that only further research can confirm.

The second research question explored the thinking style profiles of Chinese education leaders and those of non-education leaders using Sofo's TSI. The results demonstrating that the education leaders scored themselves significantly higher when compared with the non-education leaders on the conditional style suggests that they perceive themselves to be comparatively more comfortable with accepting rules and decisions without question. With regard to the exploring style, the non-education leaders scored themselves significantly higher compared with the education leaders indicating that they have a comparatively stronger preference to search all sides of an issue, to engage in divergent thinking and to generate options. Similarly, on the creative thinking style, non-education leaders scored themselves more highly than education leaders indicating that they perceived themselves to have a greater preference for creating broad perspectives and a sense of the whole. The significant differences between the two categories of leaders suggest that the non-education leaders tend to see themselves as independent thinkers, and prefer to be more exploratory and open to ideas in their thinking styles than do the education leaders. The thinking style profile of the non-education leaders suggests a comparatively stronger preference for creativity, exploration and independent thought processes than education leaders indicating they are perhaps more at the forefront of the widespread change that China is currently experiencing.

The work has given some insight to the discipline knowledge on thinking style and culture and in particular there is the potential to help improve our understanding of preferences and perceptions of Chinese leaders. Only a portion of performance is attributed

to intelligence and ability, the rest is due to one's preferences for thinking and dealing with information and situations. It is important to appreciate the thinking styles of Chinese leaders as the basis for their unique operation in the world. The study has developed a culturally sensitive model of thinking style for leaders based on empirical analysis of thinking style inventories plus the experiences of the author working with Chinese leaders. This in itself contributes to our knowledge of Chinese leaders' conceptions of thinking and problem-solving.

Given that this work is exploratory, it could be useful to conduct further study to confirm the findings and also to monitor the impact of unparalleled changes that are being revealed in China as it continues to penetrate the modern globalised world. Indeed, the different cognitive frameworks acknowledged by Chinese leaders inform cultural frameworks which in turn impact on the interactions between diverse cultural traditions. As China continues to reach out and as Western countries enter their culture and exchanges occur, learning and development may be seen within a framework of intercultural dynamics that restructure all of the players' cognitive frameworks. Further study of thinking styles in Chinese and Western leaders will also assist us to gain additional insights into the contributions that are being made. This, in turn, may add to mutually dynamic and constructivist exchanges across economic, educational, political and social dimensions as people from China continue to interact with those from the West.

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About the author

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~~The Workers' Educational Association of Victoria and the University of Melbourne: A clash of purpose?~~

~~Gordon Dadswell
School of Professional Development and Leadership
University of New England~~

~~The paper challenges an argument made by Alf Wesson in 1972. His argument was that the failure of the University of Melbourne Extension Board to work effectively with the Worker's Educational Association of Victoria was almost exclusively as a result of the poor management skills and personality of the Director of University Extension, Professor John Gunn. The paper argues that in fact it was the failure by four University of Melbourne inquiries to resolve a difficult situation. The lack of resolution was due to a complete misunderstanding by the University of the role of the Workers' Educational Association.~~
